

Serial No.: 09/646,773
Atty. Docket No.: 120360.00145
Reply to Office Action of December 22, 2003

R E M A R K S

In view of the above amendments and foregoing remarks, favorable reconsideration in this application is respectfully requested. By this amendment, claims 1-21 were amended, and claim 22 submitted. Accordingly, claims 1-22 remain pending in the application, including independent claims 1, 10, 17, and 22.

Specification

The specification has been amended to claim priority to the parent patent (U.S. Patent No. 6,522,638) under 35 U.S.C. § 120.

Information Disclosure Statement

An IDS is submitted herewith to make of record the references cited in the parent patent.

Drawing Objection

The Examiner objects to the drawing since the decimation filter of claims 7, 16, and 20, is not shown. Applicants respectfully submit that the Examiner's objection be withdrawn. Claims 7, 16, and 20 do not refer to a decimation filter, but that the digital signal processor (DSP) decimates the control channel. Since the DSP is shown in Fig. 6 as element 35, the drawing requirement is satisfied.

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Claim Objections

The Examiner objects to claims 1-8, 10-17, and 19 for certain informalities.

Applicants have amended the claims to comply with the Examiner's suggested corrections.

Claim Rejection – 35 U.S.C. §§102, 103

The Examiner rejects claims 1-6, 8, 10-14, 17-19, and 21 under 35 U.S.C. §102 as anticipated by Panech (U.S. Patent No. 5,657,358). The Examiner rejects claims 7, 16, and 20 under 35 U.S.C. § 103 as unpatentable over Panech in view of Nagano (U.S. Patent No. 5,808,463). The Examiner rejects claim 9 under 35 U.S.C. § 103 as unpatentable over Panech and Stuart (U.S. Patent No. 5,666,648).

The present invention is a packet switching network having a control station and mobile terminals that communicate with the control station over a wireless link. The control station generates a plurality of data channels that carry the data packets, and a control channel that carries control information pertaining to the data channels. The data channels and the control channel are transmitted to the mobile terminals as an aggregate signal. The terminals have a receiver to receive the aggregate signal, an ADC for digitizing the received signal, and a buffer for storing the digitized received signal. The terminals monitor the control channel and process the stored signal from the data channels in response to the control information on the control channel.

As required by the claims, the carriers having data packets are transmitted simultaneously with the control channel carrier as an RF signal (claim 1), or as an aggregate signal (claims 10, 22), or that the terminals receive a signal having a control channel and data channels (claim 17). The terminals receive the RF signal, the ADC digitizes the received signal, and the buffer stores the digitized received signal. A terminal processor monitors the buffer and extracts control information and data packets from the stored signal. The data

packets are extracted from the data channels in response to the control information in the control channel.

Thus, the control information and data packets are not only simultaneously transmitted, but also stored in the buffer. The data and control information are in different carriers (different RF frequencies), the aggregate carriers being transmitted in frames (page 3 lines 22-24). At the terminal, each aggregate frame is stored in the buffer and then the terminal, only after decoding the control channel information for that frame, decodes any data packet information on different carriers in the same frame as indicated by the control information (page 3 lines 25-30). The processor extracts the packet data, which is stored in the buffer, in response to the control information.

The primary reference relied on by the Examiner is Panech. Panech is an RF telephone system that provides multiple speech and/or data signals simultaneously over a single RF channel or plural RF channels. Panech does not teach that control information and data packets are stored at the terminal, and then the data packets are extracted from the stored data channels based on the control information transmitted in the same frame as the data packet. Accordingly, only the present invention teaches storing the data channels and the control channel, and then extracting the desired data channels from that stored information depending on the control information in the control channel. Panech does not teach or suggest a terminal having a buffer that stores both control and data packets, and then processes the data packets that are stored in the buffer in accordance with the control information.

In addition, contrary to the Examiner's assertion, Panech does not teach a packet communications system. The Panech system is a circuit switched system. Circuits are established and the bandwidth dedicated prior to information transmission, the information is

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transmitted on the assigned channel, and the channel is disconnected after completion of the transmission.

The Panech system uses only assigned channels for carrying the voice traffic. Thus, the channel assignment must be coordinated in a message exchange occurring before the voice channel is established. In contrast, the present invention has the flexibility to support multiple access methods in the reverse data channels such as unslotted ALOHA, slotted ALOHA and assigned channel (page 4 lines 12-14).

Further, because the Panech system uses a scheme which time division multiplexes the control information (with up to 3 voice circuits in a channel), the terminal is thus decoding all information in the channel in order to extract the RCC information. The RCC may be in a separate channel from an assigned voice circuit, and a terminal would normally operate on only one frequency at a time (col. 10, line 38). Thus, the RCC would not be continually monitored while a voice call is in progress. The present invention, in contrast, separates the control information into its own frequency (i.e. a FDM as opposed to a TDM channel) which is monitored continually by all terminals assigned to that control channel.

Moreover, Nagano and Stuart do not store data channels and a control channel, and extract data packets based from the stored information based on extracted control information. Thus, none of the secondary references cited by the Examiner teach any of the shortcomings of Panech. Accordingly, Applicants respectfully submit that independent claims 1, 10, 17, and 22 are patentable over Panech, whether considered alone or in combination with either of Nagano or Stuart.

In the event there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

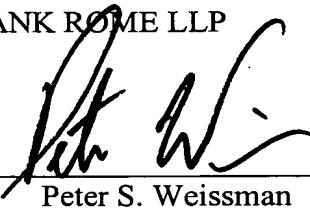
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Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (120360.00145). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, Applicants hereby petition under 37 CFR 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully submitted,

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